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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,941	11/25/2003	Franklin G. Ascarrunz	DN 1539	6897
26483	7590	11/23/2005	EXAMINER	
ANCEL W. LEWIS, JR. 425 WEST MULBERRY SUITE 101 FORT COLLINS, CO 80521			CHOE, HENRY	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,941

Applicant(s)

ASCARRUNZ ET AL.

Examiner

Henry K. Choe

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-12 is/are allowed.
- 6) ☒ Claim(s) 1, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 2-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Examiner hereby withdraws the finality of last office action (final rejection) and applies new non-final office action as follows:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Cavers (Fig. 1).

Cavers (Fig. 1) discloses an amplifier circuit comprising a primary amplifier (A1) having an input (15) for receiving the input signal (51) and an output (20) for providing an amplified output signal (a signal coming out of the output terminal of primary amplifier A1), a first circuit means (CGA1, A1, S2, C1) which is connected to the input (15) and the output (20) for isolating amplifier generated noise (45) [It should be noted that the CGA1 provides means to change the amplitude and phase so that the signal component is cancelled at the combiner C1, leaving only the IM distortion at line 45; see column 1, lines 51-54], a second circuit means (DL2, C2) which is connected to the first circuit means (CGA1, A1, S2, C1) and to the output (20) for superpositioning the amplifier generated noise (45) onto the output signal (a signal coming out of the output

terminal of primary amplifier A1) to cancel the amplifier generated noise (45) from the output signal [It should be noted that when the element CGA2 is correctly adjusted, the IM distortion is cancelled at the combiner C2, leaving only the amplified input signal at line 75; see column 1, lines 59-62], and a third circuit means (S1, DL1, S3, CT1) which is connected to the input (15) and to the first circuit means (CGA1, A1, S2, C1) for mixing the input signal (105) [It should be noted that the signal 105 is driven from the input signal 51.] and amplifier generated noise (100) [It should be noted that the signal 100 is driven from the amplifier generated noise 45] to produce a first control signal (115, 110) and modulating one of the input signal (51) and the output signal (a signal coming out of the output terminal of primary amplifier A1) in response to the first control signal (115, 110).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox (Fig. 1) in view of Cavers (Fig. 1).

Wilcox (Fig. 1) discloses an amplifier circuit comprising a resonator (13), a phase modulator (11) which is connected to the resonator (13), and an amplifier circuit (10) which is connected to the resonator (13) and the phase modulator (11). As described

above, Wilcox (Fig. 1) discloses all the limitations in the claim 13 except for that the internal structures of the amplifier circuit. Cavers (Fig. 1) discloses an amplifier circuit comprising a primary amplifier (A1) having an input (15) for receiving the input signal (51) and an output (20) for providing an amplified output signal (a signal coming out of the output terminal of primary amplifier A1), a first circuit means (CGA1, A1, S2, C1) which is connected to the input (15) and the output (20) for isolating amplifier generated noise (45) [It should be noted that the CGA1 provides means to change the amplitude and phase so that the signal component is cancelled at the combiner C1, leaving only the IM distortion at line 45; see column 1, lines 51-54], a second circuit means (DL2, C2) which is connected to the first circuit means (CGA1, A1, S2, C1) and to the output (20) for superpositioning the amplifier generated noise (45) onto the output signal (a signal coming out of the output terminal of primary amplifier A1) to cancel the amplifier generated noise (45) from the output signal [It should be noted that when the element CGA2 is correctly adjusted, the IM distortion is cancelled at the combiner C2, leaving only the amplified input signal at line 75; see column 1, lines 59-62], and a third circuit means (S1, DL1, S3, CT1) which is connected to the input (15) and to the first circuit means (CGA1, A1, S2, C1) for mixing the input signal (105) [It should be noted that the signal 105 is driven from the input signal 51.] and amplifier generated noise (100) [It should be noted that the signal 100 is driven from the amplifier generated noise 45] to produce a first control signal (115, 110) and modulating one of the input signal (51) and the output signal (a signal coming out of the output terminal of primary amplifier A1) in response to the first control signal (115, 110). It would have been obvious to substitute

Cavers's amplifier in place of Wilcox's amplifier (10 of Wilcox) since Wilcox (Fig. 1) discloses a generic amplifier thereby suggesting that any equivalent amplifier would have been usable in Wilcox's reference.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Higuchi (Fig. 1) in view of Cavers (Fig. 1).

Higuchi (Fig. 1) discloses an amplifier circuit comprising first (11) and second (111) amplifier circuits, and a frequency mixer (13) which is connected to the first (11) and second (111) amplifier circuits. As described above, Higuchi (Fig. 1) discloses all the limitations in the claim 14 except for that the internal structures of the amplifier circuits. Cavers (Fig. 1) discloses an amplifier circuit comprising a primary amplifier (A1) having an input (15) for receiving the input signal (51) and an output (20) for providing an amplified output signal (a signal coming out of the output terminal of primary amplifier A1), a first circuit means (CGA1, A1, S2, C1) which is connected to the input (15) and the output (20) for isolating amplifier generated noise (45) [It should be noted that the CGA1 provides means to change the amplitude and phase so that the signal component is cancelled at the combiner C1, leaving only the IM distortion at line 45; see column 1, lines 51-54], a second circuit means (DL2, C2) which is connected to the first circuit means (CGA1, A1, S2, C1) and to the output (20) for superpositioning the amplifier generated noise (45) onto the output signal (a signal coming out of the output terminal of primary amplifier A1) to cancel the amplifier generated noise (45) from the output signal [It should be noted that when the element CGA2 is correctly adjusted, the IM distortion is cancelled at the combiner C2, leaving only the amplified input signal at

line 75; see column 1, lines 59-62], and a third circuit means (S1, DL1, S3, CT1) which is connected to the input (15) and to the first circuit means (CGA1, A1, S2, C1) for mixing the input signal (105) [It should be noted that the signal 105 is driven from the input signal 51.] and amplifier generated noise (100) [It should be noted that the signal 100 is driven from the amplifier generated noise 45] to produce a first control signal (115, 110) and modulating one of the input signal (51) and the output signal (a signal coming out of the output terminal of primary amplifier A1) in response to the first control signal (115, 110). It would have been obvious to substitute Cavers's amplifier in place of Higuchi's amplifiers (11 and 111 of Higuchi) since Higuchi (Fig. 1) discloses the generic amplifiers thereby suggesting that any equivalent amplifiers would have been usable in Higuchi's reference.

Allowable Subject Matter

Claims 2-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for Allowance

Claims 10-12 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Regarding claim 2, the closest prior art of record, Cavers (Fig. 1) does not disclose the following limitations: a second modulator connected to the output.

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Regarding claim 5, the closest prior art of record, Cavers (Fig. 1) does not disclose the following limitations: a second combiner connected to the third and fourth modulators.

Regarding claim 8, the closest prior art of record, Cavers (Fig. 1) does not disclose the following limitations: a loop filter connected to the detector and to the fifth modulator.

Regarding claim 10, the closest prior art of record, Cavers (Fig. 1) does not disclose the following limitations: a sixth modulator with a variable delay and a variable attenuator.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Choe whose telephone number is (571) 272-1760.


HENRY CHOE
PRIMARY EXAMINER